

VLASOV, V.Ye.; KASHKIN, V.I.

Temperature conditions in the phenol purification of a Romashkino -
petroleum deasphalted product. Nefteper. i neftekhim. no. 3:3-5 63
(MIRA 17:9)

1. Novo-Gor'kovskiy neftepererabatyvayushchiy zavod.



PUSHKAREV, V.F.

ZHAVARENKO, V.A.

25 (1)

13

PHASE I BOOK EXPLOITATION

80V/292

Moscow. Vysshaya tekhnicheskaya uchilishcha. Kafedra "Mashiny i tekhnologiya proklatki i volocheniya"

Prokatnyye stany i tekhnologiya proklatki; obrabotka stany (Rolling Mills and Methods of Rolling; Collection of Articles) Moscow, Mashgiz, 1957. 125 p. (Series: Moscow. Vysshaya tekhnicheskaya uchilishcha. /Trudy/ vyp. 80) 4,000 copies printed.

Ed.: M.L. Zarochinskiy, Doctor of Technical Sciences, Professor; Tech. Ed.: Ye.M. Matveyeva; Managing Ed. for Literature on Heavy Machine Building: Ya.S. Golovin, Engineer.

PURPOSE: This collection of articles is intended for the personnel of scientific research institutes, engineers, designers, teachers and students specializing in rolling methods and the building of rolling mill machinery.

COVERAGE: Theoretical and experimental studies done by the scientific workers of the department of "Machinery and methods of rolling and drawing" of MVTU (Moscow Higher Technical School) issued Russian are published in this collection.

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The articles deal with the following topics: spreading of stock in rolling and distribution of stresses and spread along the width of the stock, resistance to deformation in metal forming, change of the form of the strip depending on dimensions of the contact area in rolling in plain rolls; the theory of elastoplastic bending of a strip during straightening on a multirell machine; investigation of basic parameters characterizing the resistance of material to rolling; simplified formula for spreading, and measuring unit procedure along the arc of contact using strain gages. No personalities are mentioned. There are 41 references, 39 Soviet and 2 English.

TABLE OF CONTENTS:

Pushkarov, V.F., Candidate of Technical Sciences. Determination of Parameters Characterizing Resistance to Deformation of the Stock in Rolling

Card 3/4

137-58-6-12144

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 6, p 138 (USSR)

AUTHOR: Pushkarev, V.F.

TITLE: Selection of a Parameter Characterizing the Resistance to Deformation of Metals During Rolling (Opredeleniye parametra, kharakterizuyushchego soprotivleniye deformatsii metalla pri prokatke,

PERIODICAL: V sb.: Prokatn. stany i tekhnol. prokatki. (MVTU, 80).
Moscow Mashgiz, 1957, pp 90-105

ABSTRACT: By accepting a rectilinear relationship between x and y in the differential equation of specific pressure (P), the author demonstrates that in the course of investigations performed for the purpose of determining the specific P exerted by metal against the rolls it is expedient that the P be determined as a function of the criteria $k/\bar{P} \cdot 2h/\Delta h$ and $2\mu l/\Delta h$, where h is the mean height of the center of deformation, μ the coefficient of friction, l the length of the arc of seizure, Δh the absolute reduction, $\bar{P}$ the mean specific P , and where $k = 1.15$. It is pointed out that owing to significant differences in conditions of deformation during static testing and during rolling of

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137-58-6-12144

Selection of a Parameter Characterizing the Resistance (cont.)

metal, considerable errors are introduced if results of mechanical (laboratory) testing are employed in the determination of P which is exerted by the metal against the rolls. On the strength of the considerations presented above, it is suggested that instead of employing the value $k=1.15 \gamma_s$ when computing the P with the aid of existing theoretical formulae, the initial magnitude of the actual resistance to deformation be established from the value of the mean specific P (base value of P) obtained during rolling of specimens at reductions of 10-13% and under conditions when $l=h_{cp}$, $B \gg h$, and μ is sufficiently small.

M. Z.

1. Metal--cold rolling 2. Metals--Properties 3. Rolling mills--Applications
4. Differential equations--Applications 5. Pressure--Mathematical analysis

Card 2/2

PUSHKAREV, V.F., kand. tekhn. nauk

Effect of external zones on the resistance to deformation during
rolling. [Trudy] MVTU no.84:92-96 '58. (MIRA 12:5)
(Rolling (Metalwork))

BUGROVA, A.A.; PUSHKAREV, V.F.

Semihot extrusion of stainless steels. Kuz.-shtam.proizv. 4
no.8:15-17 Ag '62. (MIRA 15:8)
(Extrusion (Metals)) (Steel, Stainless)

PUSHKAREV, V.I.; SHCHEGOLEVA, A.M.; Primali uchastiye: DUNDICH, Ye.I.;
VISHNEVSKIY, V.L.; LEYBFREYD, A.Yu.; MIZERNIK, P.A.; RAPUTOVA,
Ye.M.; KHRISTOFOROV, T.A.; YAMPOL'SKIY, L.S., red.; STAKVEL', L.,
red.; BABIL'CHANOVA, G., tekhn. red.

[English - Russian and Russian - English dictionary of building
and architectural terms] Anglo - russkii i russko - angliiskii
arkhitektruvno-stroitel'nyi slovar'. Pod red. L.S.Iampol'skogo.
Kiev, Gos. izd-vo lit-ry po stroit. i arkhitekt. USSR, 1961. 841 p.

(MIRA 14:8)

(Building--Dictionaries)

(Architecture--Dictionaries)

(English language--Dictionaries--Russian)

(Russian language--Dictionaries--English)

PUSHKAREV, V.L.

Our experience in the use of link gears for tows being pushed.
Rech.transp. 18. no.12:50-51 D '59. (MIRA 13:4)

1. Kapitan teplokhoda "Admiral Ushakov."
(Towing)

PUSHKAREV, V. M.

AID P - 861

Subject : USSR/Engineering

Card 1/1 Pub. 11 - 7/13

Authors : Ukolov, G. A. and Pushkarev, V. M.

Title : Arc welding of thick two layer steel sheets of the
MSt. 3 + 1Kh18N9T grade

Periodical : Avtom. svar., #4, 72-77, J1-Ag 1954

Abstract : Description of the arc-welding method applied to two
sheets of different thickness is presented with the
results of mechanical tests without preliminary heat
treatment.

Institution : Ural Khimash Plant (Ural Chemical and Machine-Building
Plant)

Submitted : My 5, 1954

POLUSHKIN, K.K.; YEMEL'YANOV, I.Ya.; DELENS, P.A.; ZVONOV, N.V.; ALEKSENKO, Yu.I.; GROZDOV, I.I.; KUZNETSOV, S.P.; SIROTKIN, A.P.; TOKAREV, Yu.I.; LAVROVSKIY, K.P.; BRODSKIY, A.M.; BELOV, A.R.; BORISYUK, Ye.V.; GRYAZEV, V.D.; POPOV, D.N.; KORYAKIN, Yu.I.; FILIPPOV, A.G.; PETROCHUK, K.V.; KHOROSHAVIN, V.D.; SAVINOV, N.P.; MESHCHERYAKOV, M.N.; PUSHKAREV, V.P.; SUROYEGIN, V.A.; GAVRILOV, P.A.; PODLAZOV, L.N.; ROGOZHNIK, I.N.; TETYUKOV, V.D.

"Arbus" atomic power plant with organic heat transfer agent and moderator. Atom. energ. 17 no.6:439 D '64 (MIRA 18:1)

VLASENKO, V.Ye.; PUSHKAREV, V.P.

Experience in the industrial purification with phenol of the
components of the DSP-11 oil from Romashkino crudes. Khim.
i tekhn. topl. i masel 8 no.4:27-31 Ap '63. (MIRA 16:6)

(Romashkino region--Petroleum--Refining)
(Phenols)

BERNADYUK, Z.A.; LEVCHENKO, D.N.; PUSHKAREV, V.P.; CHIRIMANOV, P.A.;
KORZH, A.F.; ZHURAVLEV, K.A.; KOVALENKO, N.F.

Petroleum desalting in electro-desalting units in the presence
of the OP-10 nonionogenic demulsifying compound. Khim.i.
tekh.topl.i masel 5 no.9:31-37 S '60. (MIRA 13:9)

1. Novo-Gor'kovskiy neftepererabatyvayushchiy zavod i Vsesoyuznyy
nauchno-issledovatel'skiy institut po pererabotke nefi i poluche-
niyu iskusstvennogo zhidkogo topliva.
(Petroleum--Refining--Desalting)

27c
L 24212-65 ENT(n)/EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pu-4 DM

ACCESSION NR: AP5001265

13 S/0089/64/017/006/0439/0448

AUTHOR: Polushkin, K. K.; Yemel'yanov, I. Ya.; Delens, P. A.; Zvonov, N. V.;
Aleksenko, Yu. I.; Grozlov, I. I.; Kuznetsov, S. P.; Sirotkin, A. P.; Tokarev,
Yu. I.; Lavrovskiy, K. P.; Brodskiy, A. M.; Belov, A. R.; Borisnyuk, Ye. V.;
Gryazev, V. M.; Tetyukov, V. D.; Popov, D. N.; Koryakin, Yu. I.; Filippov,
A. G.; Petrochuk, K. V.; Khoroshavin, V. D.; Savinov, N. P.; Meshcheryakov,
M. N.; Pushkarev, V. P.; Suroyegin, V. A.; Gavrilov, P. A.; Podlazov, I. N.;
Rogozhkin, I. N.

14
TITLE: Atomic electric power installation "Arbus" with organic coolant and moderator

SOURCE: Atomnaya energiya, v. 17, no. 6, 1964, 439-448

TOPIC TAGS: small nuclear reactor, organic coolant, organic moderator, reactor economy, nuclear reactor

ABSTRACT: The paper is a summary of the SSSR # 307 report at the Third Inter-

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L 24212-65

ACCESSION NR: AP5001265

national Conference on Peaceful Uses of Atomic Energy, 1964. It describes an installation of a reactor in which organic liquid serves as the coolant, and as the moderator. The low-power reactors of about 5 Mw are expected to be economical in the remote regions where the usual energy sources are not available. A regeneration system is described for the coolant which removes the products of radio-lysis. Orig. art. has: 7 figures

ASSOCIATION: None

SUBMITTED: 00

NR REF SOV: 000

ENCL: 00

SUB CODE: NP

OTHER: 000

Card 2/2

PUSHKAROV, V.F.; GILIASOVA, T.V.

Evaporation from the soil surface according to data of hydro-meteorological stations conducting observations according to the program of the IGY. Trudy GGI no.92:49-90 '64. (MIRA 17:11)

PUSHKAREV, V.V.; CHUSHNYAKOV, V.F.

Ways of lowering the cost of operating tower cranes in the building
of apartment houses. Stroi. v raion. Vost. Sib. i Krain. Sev. no.2:
170-179 '62. (MIRA 18:7)

PUSHELEV, Viktor Viktorovich; NOVIK, Zol'man Israilevich;
CHUSHNYAKOV, Vasilii Iadeyevich

[Building a section of large-panel and large-block apartment houses by the system of a constant flow line; practices of the Krasnoyarsk Housing Construction Trust No.1] Zastroika kvartala krupnopanel'nymi i krupnoblochnymi domami po sisteme postoianno deistvuiushchikh potochnykh lini; iz opyta tresta "Krasnoyarskzhilstroil-1." Moskva, Stroizdat, 1964. 32 p. (MIRA 18:4)

1. Moscow. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.
2. Zaveduyushchiy kafedroy stroitel'nogo proizvodstva Novosibirskogo instituta inzhenerov vodnogo transporta (for Pushkarev).
3. Glavnyy inzhener Krasnoyarskogo tresta industrial'nogo zhilishchnogo stroitel'stva no.1 (for Novik).
4. Glavnyy tekhnolog po krupnopanel'nomu domostroyeniyu Glavnogo upravleniya po zhilishchnomu i grazhdanskomu stroitel'stvu v gorode Krasnoyarske (for Chushnyakov).

PUSHKAREV, Viktor Viktorovich, kand. tekhn. nauk; RICH'YEV,
Aleksandr Petrovich, kand. tekhn. nauk; OKUNEVA, Raisa
Makedonovna, arkh.; GORBATOVSKIY, I.V., red.

[Large-panel housing construction; from practices at build-
ing projects in Novosibirsk, Krasnoyarsk, and Kemerovo]
Krupnopanel'noe domostroenie; iz opyta zastroiki Novosibirska,
Krasnoyarska i Kemerova. Novosibirsk, Zapadno-Sibirskoe
knizhnoe izd-vo, 1964. 208 p. (MIRA 18:5)

ACCESSION NR: AP4012265

S/0089/64/016/001/0048/0051

AUTHOR: Pushkarev, V. V.; Yegorov, Yu. V.; Tkachenko, Ye. V.; Zolotavin, V. L.

TITLE: The clearing and purification of radioactive sewage by the flotation method

SOURCE: Atomnaya energiya, v. 16, no. 1, 1964, 48-51

TOPIC TAGS: ferrous hydroxide, aluminum hydroxide, flotation method, ion exchange, titration method, nephelometric method, residue, settling method, solvation

ABSTRACT: The flotation of ferrous and aluminum hydroxides to purify radioactive sewage water containing surface-active, detergent, and complex-forming substances has been investigated. The moisture of the floated hydroxides and the effective elimination of the hardsalt (sylvite), detergents, and certain radioactive elements from the solution were studied. Elimination of radioactivity from the drain water was determined by the extraction of Sr^{90} , Y^{90} , and Nb^{95} . The temperature maintained in the course of all experiments was $16-20^\circ\text{C}$. Preliminary tests revealed sulfate soap to be a satisfactory flotation agent for the selected hydroxides. Comparison of

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ACCESSION NR: AP4012265

the flotation and settling methods of water purification showed that the residue left by the flotation method is smaller in volume and contains less moisture than the residue obtained by the settling method under similar conditions. Also, the flotation method took much less time than the settling method in clearing the sewage water. Some industrial enterprises use ferrous salts as well as aluminum salts, or a mixture of both, as a coagulant for the purification of their waste waters. It was found that in a low-alkaline medium aluminum hydroxide can clarify a solution by either the settling or the flotation method. Orig. art. has: 3 tables.

ASSOCIATION: none

SUBMITTED: 28Jan63

ATD PRESS: 3045

ENCL: 00

SUB CODE: NP

NO REF S OV: 007

OTHER: 003 *

Card 2/2

PUSHKAREV, V.V.; YEGOROV, Yu.V.; TKACHENKO, Ye.V.; ZOLOTAVIN, V.L.

Use of the flotation method in clearing and purifying radioactive waste
waters. Atom. energ. 16 no.1:48-51 Ja '64. (MIRA 17:2)

PI. OF. 1965. I.M.; FILATOVA, N.A.; PUSHKAREV, V.V.

Antifriction properties of iron-base ceramic metal materials.
Fiz.-khim. mekh. mat. i no.5:567-570 1965. KHM 1965

1. Institut problem materialovedeniya AN UkrSSR, Kiev. Submitted
Oct. 15, 1965.

PUSHKAREV, V.V.; CHUSHNYAKOV, V.F.

Potentials for lowering the operating cost of tower cranes.
Izv.vys.ucheb.zav.; stroi. i arkhitekt. 4 no.6:155-161 '61.

(MIRA 15:2)

1. Novosibirskiy institut inzhenerov vodnogo transporta.
(Cranes, derricks, etc.)

PUSHKAREV, V.V., kand.tekhn.nauk, dotsent

Effect of assembly-line methods in reducing building time,
cost, and labor expended in the construction of apartment houses.
Trudy MIEI no.15:221-229 '61. (MIRA 14:12)

1. Novosibirskiy institut inzhenerov vodnogo transporta.
(Novosibirsk—Construction industry)
(Apartment houses)

PUSHKAREV, V.V.

Effect of experimental tuberculosis on exocrine functions of
the pancreas. Probl.tub. 39 no.3:77-80 '61. (MIRA 14:5)

1. Iz kafedry patologicheskoy fiziologii (zav. - dotsent R.B.
TSinkalovskiy, nauchnyy rukovoditel' prof. G.V. Peshkovskiy
[deceased]) Permskogo meditsinskogo instituta.
(TUBERCULOSIS) (PANCREAS—SECRECTIONS)

PUSHKAREV, V.V., dotsent, kand.tekhn.nauk

Rapid construction of apartment houses using assembly-line
methods and costs of building and assembling operations.

Trudy MIEI no.14:269-282 '59. (MIRA 13:1)

1. Novosibirskiy institut inzhenerov vodnogo transporta.
(Precast concrete construction)
(Construction industry--Costs)

PUSHKAREV, V.V.; SKRYLEV, L.D.; BAGRETISOV, V.F.

Concentrating radioactive cesium by extraction with gelatin
foam. Radiokhimiia 1 no.6:709-711 '59. (MIRA 13:4)
(Cesium--Isotopes) (Gelatin)

BAGRETISOV, V.F.; PUSHKAREV, V.V.

Interaction between half-burnt dolomite ($MgO.CaCO_3$) and various
elements present in trace concentrations in aqueous solutions.

Radiotekhnika 2 no.4:446-450 '60.

(MIRA 13:9)

(Dolomite)

18.3000

77501

SOV/80-33-1-10/49

AUTHORS: Pushkarev, V. V., Skrylev, L. D., Bagretsov, V. F.

TITLE: Recovery of Mixed Ferrocyanides of Heavy Metals from Hydrosols and Suspensions

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 1, pp 59-61 (USSR)

ABSTRACT: This is the first communication from a series of articles on the use of gelatinous foam for concentration of radioactive cesium solutions. In this work the authors studied separation of colloidal and precipitated ferrocyanides ($K_2MnFe(CN)_6$, $K_4Co_{10}Fe(CN)_6$, $K_4Ni_{14}Fe(CN)_6$, $K_2Zn_3Fe(CN)_6$, and $K_2Cu_3Fe(CN)_6$) and $Pb_2Fe(CN)_6$ from their solutions by means of gelatin foam. Solutions of potassium ferrocyanide and of the respective metal salts were added to 200 ml of distilled water. After addition of 1% of freshly prepared gelatin solution, the volume of the suspension was brought up to 300 ml,

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Recovery of Mixed Ferrocyanides of Heavy
Metals from Hydrosols and Suspensions

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SOV/80-33-1-10/49

and the solution was mixed and poured into the foam apparatus shown in Fig. 1. Recovery of the solid phase (colloidal particles and precipitate) was complete after 3-4 min of foaming (since the ferrocyanides are colored, their separation from the solution could be easily seen). Relation between solid phase concentration and minimum quantity of gelatin necessary for the complete recovery of the former is illustrated in Fig. 2. The necessary volume of gelatin solution also depends upon the pH value of the ferrocyanide solution. A neutral or weakly acidic medium was found to be most favorable in the recovery process. For complete recovery of 50 mg of $K_4Ni_4Fe(CN)_6 \cdot 3H_2O$, the volume of the 1% gelatin solution could be decreased 6-fold (from 9.0 ml to 1.5 ml) by changing pH of the solution from 2 to 5. There are 2 figures; and 7 Soviet references.

ASSOCIATION: Ural S. M. Kirov Polytechnic Institute (Ural'skiy politekhnicheskiy institut imeni S. M. Kirova)
SUBMITTED: December 29, 1958 Card 2/4

Recovery of Mixed Ferrocyanides of Heavy Metals from Hydrosols and Suspensions 77501, SOV/80-33-1-10/49

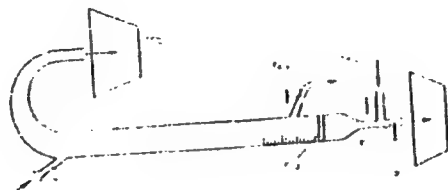


Fig. 1. Apparatus for recovery of mixed ferrocyanides of heavy metals by foaming. (1) Inlet opening for introduction of initial solution; (2) glass filter Nr 3, (3) foam receiving vessel; (4) vessel for receiving filtrate; (5) stopcock for air feed (under 1.5 atm pressure); (6) stopcock for withdrawal of test samples; (7) stopcock for discharge of filtrate.

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Recovery of Mixed Ferrocyanides of
Heavy Metals From Hydrosols and Suspensions

77501, SOV/80-33-1-10/49

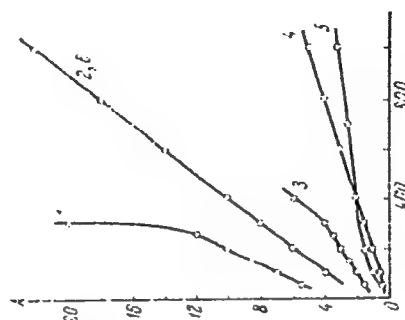


Fig. 2. Effect of concentration of mixed ferrocyanides upon volume of 1% gelatin solution necessary for complete recovery of precipitate by frothing, at pH of initial solution = 4.6. (A) Volume of 1% gelatin solution (in ml); (B) quantity of precipitate (in mg/l). (1) $K_2Zn_3[Fe(CN)_6]_2$; (2) $K_2Cu_3[Fe(CN)_6]_2$; (3) $K_4Ni_4[Fe(CN)_6]_3$; (4) $K_2Mn[Fe(CN)_6]$; (5) $Pb_{12}[Fe(CN)_6]_6$; (6) $K_4Co_{10}[Fe(CN)_6]_6$.

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5.2300,21.3200

77506
SOV/80-33-1-15/49

AUTHORS: Pushkarev, V. V., Skrylev, L. D., Bagretsov, V. F.

TITLE: Extraction of Radioactive Cesium by Mixed Ferrocyanides of Heavy Metals

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 1, pp 81-85 (USSR)

ABSTRACT: This is the second communication of a series on the gelatin foam method of concentrating radioactive cesium solutions. The first study, which also describes the laboratory apparatus and the preparation of some reagents, is printed on p 59 of this issue (see also Abstract 77501). Radioactive cesium was absorbed by mixed ferrocyanides such as $K_2Mn[Fe(CN)_6]$; $K_4Co_{10}[Fe(CN)_6]_6$; $K_4Ni_4[Fe(CN)_6]_3$; $K_2Cu_3[Fe(CN)_6]_2$; $K_2Zn_3[Fe(CN)_6]_2$; $Pb_2[Fe(CN)_6]$. The solid phase was then separated from the solution by centrifuging at 3,000 rpm in a laboratory centrifuge, or by frothing the

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Extraction of Radioactive Cesium by
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solution with compressed air and collecting the foam with the entrapped Cs^{134} -containing precipitate. 1% gelatin and 50% excess of ferrocyanide were used as coagulating agents. The marked effect of the pH of the solution on the extraction is shown in Figs. 1 to 6; full lines designate the foam extraction, dotted lines designate the centrifuging extraction; A is the Cs extraction (in %); and B is the pH value. It was also established that a low concentration of the adsorbent (60 mg/liter) already gave a maximum degree of radioactive cesium extraction. The amount of the solution carried off as foam was approximately 1 to 1.4% of the initial solution volume. Practically 100% extraction was obtained from a solution with pH = 7 in a three-stage procedure. The first extraction yielded 98.84% cesium; the remaining solution was treated with ferrocyanide and gelatin in the same amounts as previously, and the second frothing extracted 89.07% of the remaining cesium. Finally, a third frothing gave 81.98% of the cesium remaining after the second operation, and the total extraction amounted to

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Extraction of Radioactive Cesium by
Mixed Ferrocyanides of Heavy Metals

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SOV/60-33-1-15/49

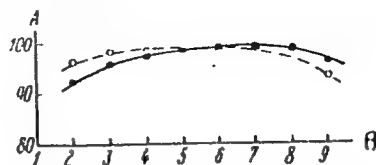


Fig. 1. Effect of the initial solution's pH on the extraction of Cs^{134} by mixed copper ferrocyanide.

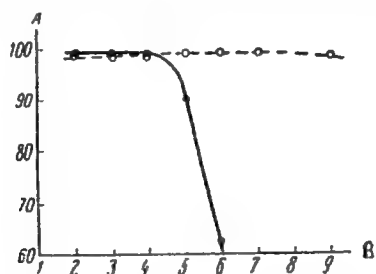


Fig. 2. Effect of the initial solution's pH on the extraction of Cs^{134} by mixed nickel ferrocyanide.

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Extraction of Radioactive Cesium by
Mixed Ferrocyanides of Heavy Metals

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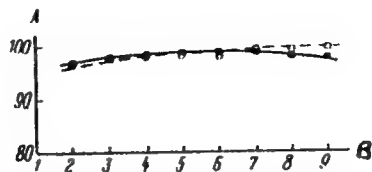


Fig. 3. Effect of the initial solution's pH on the extraction of Cs¹³⁴ by mixed cobalt ferrocyanide.

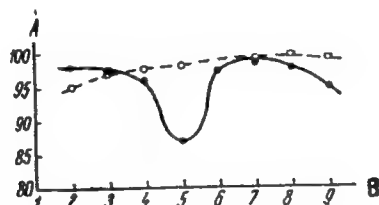


Fig. 4. Effect of the initial solution's pH on the extraction of Cs¹³⁴ by mixed manganese ferrocyanide.

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Extraction of Radioactive Cesium by
Mixed Ferrocyanides of Heavy Metals

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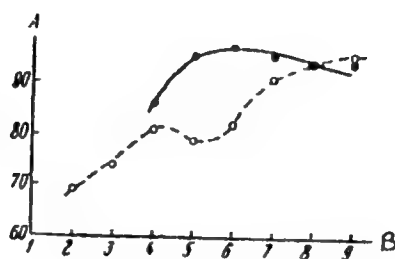


Fig. 5. Effect of the initial solution's pH on the extraction of Cs^{134} by mixed zinc ferrocyanide.

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Extraction of Radioactive Cesium by
Mixed Ferrocyanides of Heavy Metals

77506
SOV/80-33-1-15/49

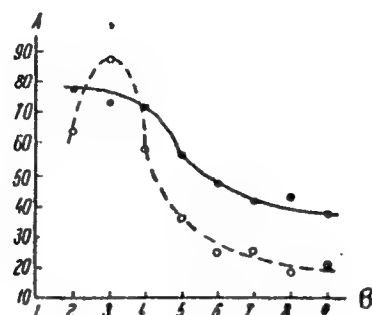


Fig. 6. Effect of the initial solution's pH on the extraction of Cs^{134} by mixed lead ferrocyanide.

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Extraction of Radioactive Cesium by
Mixed Ferrocyanides of Heavy Metals

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99.98%. The authors express their appreciation to Professor S. G. Mokrushin for his valuable remarks before the manuscript was presented for printing. There are 6 figures; 1 table; and 6 references, 1 U.S., 5 Soviet. The U.S. reference is: E. Glueckauf, Long-Term Aspects of Fission Products Disposal, International Conference on the Peaceful Use of Atomic Energy (1955).

ASSOCIATION: Ural Polytechnic Institute imeni S. M. Kirov (Ural'skiy politekhnicheskiy institut imeni S. M. Kirova)

SUBMITTED: December 29, 1959 (Abstracter's Note: probably 1958)

Card 7/7

23882

S/186/61/003/001/015/020
A051/A129

21.3200

AUTHORS: Yegorov, Yu.V., Pushkarev, V.V., Tkachenko, Ye.V.

TITLE: Coprecipitation of micro-quantities of Sr^{90} with active manganese dioxide in the presence of macro-quantities of barium and potassium

PERIODICAL: Radiokhimiya, v 3, no 1, 1961, 87-89

TEXT: The authors have established that the competition of micro-quantities of Sr^{90} with macro-quantities of calcium and barium in their coprecipitation with active manganese dioxide obeys an equation, whereby the logarithm of the distribution coefficient of Sr^{90} is linearly dependent on the logarithm of the molar ratio of the total quantity of the analogue to the sorbent. The given equation is said to be derived from the law of active masses. The authors further show that barium is stronger than calcium in suppressing the sorption of Sr^{90} with active manganese dioxide; this fact leads to the conclusion that the formed sorbing compounds of the calcium and barium manganate

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23882

Coprecipitation of micro-quantities of Sr^{90} ...

S/186/61/003/001/015/020
A051/A129

type have varying stability, i.e., the corresponding compound of calcium is more subjected to hydrolysis than the other. The relationship described above was derived from the following considerations: 1) the sorbent is located in the range of saturation by the analogue (barium or calcium), 2) the pH of the solution is constant, 3) the ratio of the activity coefficients of the analogues and Sr^{90} in the solid phase is constant, which is the same as the absence of a noticeable interaction between the adsorbed cations (Ref 7). The factors used where: A_T the quantity of the analogue in the solid phase (in moles), A_{liquid} the quantity of the analogue in the liquid phase (in moles), $A_o = A_T + A_{\text{liquid}}$ the total quantity of the analogue in the system (in moles), ϵ the distribution coefficient of Sr^{90} equal to the ratio of the adsorbed part to the equilibrium part, m the mass of the sorbent (in moles), z_1 and z_2 the charges of the ions of the analogues and Sr^{90} . The following relationships are designated by A and G:

$$A = \frac{A_o}{m} \quad (1)$$

$$G = \frac{A_T}{m} \quad (2)$$

then on the basis of the law of active masses the expression:

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Coprecipitation of micro-quantities of Sr^{90} ...

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A051/A129

$K_0 = \frac{A_{\text{liquid}}^{1/z_1}}{A^{1/z_1}} \cdot \xi^{1/z_2}$ (3) is found, where $K_0 = \text{const}$ under conditions of constancy of the temperature; in the given case the volume of solution and sorbent mass are also constant.

If $K_0^{z_1} = K$, and transforming (3) we obtain $K = \xi^{z_1/z_2} \left(\frac{A_0}{A} - 1 \right)$ (4).

Taking into consideration (1) and (2) and taking the logarithm of (4), the following equation is obtained:

$$\lg \xi = B - \frac{z_2}{z_1} \lg (A - G) \quad (5), \text{ where } B = \lg(KG)^{z_2/z_1}.$$

An analysis of the obtained relationship showed that under the given conditions the sorbent has a capacity of 0.38 mM $\text{Sr}/\text{mM MnO}_2$. For sufficiently high values of A, formula (5) is written approximately:

$\lg \xi = B - \frac{z_2}{z_1} \lg A$ (6). The experimental data obtained agree favorably with this expression. The absolute value of the angle co-

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Coprecipitation of micro-quantities of Sr^{90} ... S/186/61/003/001/015/020
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efficient $\frac{z_2}{z_1}$ in this range is equal to 1 for both analogues. This proves the equality of the ion charges of these analogues and Sr^{90} during the exchange process. The macro-quantities of barium have a stronger depressing action on the sorption of the micro-concentrations of Sr^{90} than equimolar quantities of calcium. This is thought to be due to the different relationship of the analogues to the sorbent. There are 6 formulae and 2 graphs.

Figure 1: Coprecipitation of strontium
with active manganese dioxide.
Longmuir's isotherm.
 $t^0 = 17-19^\circ\text{C}$, strontium chloride
was labelled with Sr^{90} .
Experiments without access
of air.

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26606

S/186/61/003/004/005/007
E037/E119

21.4-200

AUTHOR: Pushkarov, V.V.

TITLE: Concentration of radioactive isotopes using
gelatine foam

PERIODICAL: Radiokhimiya, Vol.3, No.4, 1961, pp. 498-500

TEXT: Coprecipitation with ferric hydroxide is frequently used in preparative radiochemistry to concentrate radioactive isotopes from solution (Ref.1: A.N. Murin, V.D. Nefedov, I.A. Yutlandov, Usp. khim. 24, 5, 527 (1955)). However, difficulties arise due to the slow settling or filtration of the hydroxide and after removing the precipitate the solution contains a small amount of colloidal iron with an appreciable activity. The latter is especially prominent under conditions close to peptisation of the freshly precipitated hydroxide. S.G. Mokrushin (Ref.2: Koll. Zh., Vol.12, 448 (1950) and Ref.3: Secbshch. o nauchn. rab. Bses. obshch. im. D.I. Mendeleeva, Vol.2, 26, 27, (1953)) has indicated the possibility of rapid (3-4 min) and practically complete recovery from solution of colloidal metal hydroxides (including iron) using gelatine foam.

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26606

Concentration of radioactive isotopes ... S/186/61/003/004/005/007
E037/E119

This induced the author to experiment with the use of gelatine for concentrating radioactive isotopes with ferric hydroxide as carrier. The present paper is concerned with concentrating Zr^{95} , Nb^{95} , Ru^{106} , Sr^{89} , and Ce^{144} from solution by adsorption on colloidal ferric hydroxide followed by recovery with gelatine foam. Foam formation was used not only for colloidal systems but also for the finely dispersed precipitate unavoidably obtained when inorganic compounds are added to the ferric hydroxide hydrosol. Sr , Ce and Ru chlorides were used without carrier in 1N HCl; $NbO_2(C_2O_4)_2$ and $Zr(C_2O_4)_2$, also without carrier, were used in $H_2C_2O_4$. The method of foam formation was similar to that described earlier (Ref.4: V.V. Pushkarev, L.D. Skrylev, V.F. Bagretsov, Radiokhimiya, Vol.1, 6, 709 (1959)). pH was adjusted with NaOH with a relative error of ± 0.1 . The specific activity of the initial solutions was 5-15 microcuries/litre. The extent of recovery of the radioactive isotopes was determined by comparing the activities of the initial solutions with that of the solution after foam treatment. The experiments were carried out at 18-20°. The chemically pure preparations were dissolved in distilled water and made up to

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Concentration of radioactive isotopes. S/186/61/003/004/005/007
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300 ml after intensive mixing for 1 min foam was produced by blowing air through the solution. Table 2 shows the arithmetical means from 4-12 parallel measurements. The results show that Nb⁹⁵, Zr⁹⁵ and Ce¹⁴⁴ at pH 9.0; Sr⁸⁹ at pH 10.0; and Ru¹⁰⁶ at pH 6.5 are practically completely adsorbed by ferric hydroxide and go into the foam. The coagulated hydroxide was extracted by the foam as completely as the colloidal hydroxide. The amount of moisture carried with the foam was less than 1% of the volume of the initial solution. The concentration of radioactive isotopes achieved was therefore greater than 100. It is interesting to compare the rate and extent of recovery for this foam process with that of simple precipitation. Table 3 shows the appropriate data. It can be seen from Tables 2 and 3 that both factors are very much higher for the foam process than for simple precipitation. The effect of sodium chloride, sulphate, and nitrate in different concentrations on the extent of recovery of Sr⁸⁹, Ce¹⁴⁴ and Ru¹⁰⁶ was also studied. It was shown that these isotopes are recovered just as completely from solutions containing up to 60 g/litre of added salt. However, for concentrations of these added salts

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Concentration of radioactive isotopes... S/186/61/003/004/005/007
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greater than 10 g/litre there is an appreciable increase in the
volume of moisture carried with the foam and the concentration
effect decreases sharply.

There are 3 tables and 4 Soviet references.

SUBMITTED: February 29, 1960

[Abstractor's Note: This is an abridged translation.]

Card 4/6

VOZNESENSKIY, S. A.[deceased]; BAGRETISOV, V. F.; PUSHKAREV, V. V.;
ZOLOTAVIN, V. L.

Interaction of half-burnt dolomite with radioisotopes under
dynamic conditions. Radiokhimiya 3 no.4:510-511 '61.
(MIRA 14:7)

(Dolomites)
(Radioisotopes)

1. INTRODUCTION.

Comparison of radiotopes by means of gelatin staining.
Radiotopes 3 no. 1, 198-100 161. (MIL. 14:7)
(Radiotopes)

PUSHKAREV, V.V.; YEGOROV, Yu.V.; TKACHENKO, Ye.V.; PUZAKO, V.D.

Sorption of microquantities of strontium-90 by ferric hydroxide
in the presence of alkaline earth metals. Izv.vys.ucheb.zav.;
khim.i khim.tekh. 4 no.1:60-63 '61. (MIRA 14:6)

1. Ural'skiy politekhnicheskii institut imeni S.M.Kirova, kafedra
radiokhimii.

(Strontium--Isotopes) (Sorption)

BAGRETSOV, V.F.; PUSHKAREV, V.V.; BEKETOV, A.R.; NIKOLAYEV, V.M.

Effect of roasting on the ion-exchange capacity of vermiculite.
Zhur.prikl.khim. 34 no.11:2558-2560 N '61. (MIRA 15:1)

1. Ural'skiy politekhnicheskii institut imeni S.M.Kirova.
(Vermiculite) (Ion exchange)

DRAYGOR, D.A. [Draihor, D.A.]; PUSHKAREV, V.V. [Pushkar'ov, V.V.]

Effect of mechanical hardening of the surface layers of steel
on its resistance to wear in conditions of sliding friction .
Dop. AN URSR no.10:1285-1289 '61. (MIRA 14:11)

1. Institut mekhaniki AN USSR. Predstavleno akademikom AN
USSR F.P.Belyankinym [Beliankyn, F.P.].
(Strength of materials)
(Steel--Metallurgy)

PUSHKAREV, V.V.; TKACHENKO, Ye.V.; YEGOROV, Yu.V.; LYUBIMOV, A.S.

Sorption of some radioactive isotopes from aqueous solutions by
active manganese dioxide. Radiokhimiya 4 no.1:49-54 '62.
(MIRA 15:4)

(Radioisotopes) (Sorption) (Manganese oxides)

S/186/62/004/003/019/022
E075/E436

AUTHORS: Yegorov, Yu.V., Pushkarev, V.V., Tkachenko, Ye.V.

TITLE: On the influence of ethyl alcohol on the sorption of strontium ions with an active manganese dioxide

PERIODICAL: Radiokhimiya, v.4, no.3, 1962, 371-373

TEXT: The object of the work was to elucidate the nature of the connection between the parameter of sorption affinity a from the Langmuir isotherm, and the solution properties. The Langmuir isotherm is given as

$$\frac{C_p}{C_c} = \frac{1}{\Gamma \cdot a} + \frac{1}{\Gamma} C_p \quad (1)$$

where C_p - equilibrium concentration of Sr^{2+} in solution;
 C_c - adsorption of Sr^{2+} , Γ - capacity of sorbent.
An active MnO_2 was used as a sorbent. The compound undergoing distribution was $SrCl_2$ labelled with Sr^{89} , and the non-aqueous solvent ethyl alcohol. The latter was added to the solution of $SrCl_2$ in water containing a coagulated MnO_2 sol. It was found
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S/186/62/004/003/019/022
E075/E436

On the influence of ethyl ...

that the capacity of the sorbent is the same in all the experiments. Parameter α increases with the decreasing dielectric constant of the medium. It was shown that when the dielectric constant of the solution changes from 58.0 to 75.5, there exists a linear dependence of $\lg \alpha$ on the reciprocal of dielectric constant of the alcohol-water solution. There are - figure and 1 table.

SUBMITTED: May 12, 1961

Card 2/2

TKACHENKO, Ye.V.; PUSHKAREV, V.V.; YEGOROV, Yu.V.

Adsorption of strontium by manganese dioxide from water-ethanol
solutions. Izv.vys.ucheb.zav.; khim.i khim.tekh. 5 no.1:172-
174 '62. (MIRA 15:4)

1. Ural'skiy politekhnicheskii institut imeni Kirova, kafedra
radiokhimii.
(Strontium) (Adsorption) (Manganese oxides)

138-2

S/069/62/024/006/007/009
B101/B180

4-11800
AUTHORS: Skrylev, L. D., Pushkarev, V. V.

TITLE: Frothing method of concentrating radioactive cesium solutions

PERIODICAL: Kolloidnyy zhurnal, v. 24, no. 6, 1962, 738-741

TEXT: The authors examined the separation of Cs^{134} from the solution by sorption on a ferrocyanide precipitate. Precipitates of $\text{K}_2\text{Fe}[\text{Fe}(\text{CN})_6]$ and $\text{KFe}[\text{Fe}(\text{CN})_6]$ were produced directly in the radioactive solution by reaction between $\text{K}_4\text{Fe}(\text{CN})_6$ and FeSO_4 and/or $\text{Fe}_2(\text{SO}_4)_3$. The desired pH was reached by adding KOH and H_2SO_4 to the suspension which was then removed by centrifuging and the Cs^{134} content of the centrifugate determined by radiometry. The experiments were carried out at 18 - 20°C. The activity of the solutions ranged from 5.0 to 10.0 $\mu\text{c/l}$. Conclusions: The Cs^{134} sorption by the potassium ferrocyanide was 99.2 - 99.9% at pH = 2.0 - 6.0, and by the ferricyanide 98.8 - 99.9% at pH = 4.0 - 8.0.
Card 1/2

Frothing method of concentrating ...

S/069/62/024/006/007/009
B101/B180

In an attempt to concentrate the ferrocyanides in the foam 1% aqueous gelatin solution was added and air bubbled through, but only 40% of Cs^{134} could be extracted, as hydrophilic ferrocyanides form no stable surface films and do not pass over into the foam. A more stable surface film is obtained from CuSO_4 reacting with $\text{K}_4\text{Fe}(\text{CN})_6$. The resulting $\text{K}_2\text{Cu}_3[\text{Fe}(\text{CN})_6]_2$ passes over into the foam, and 99.4% of Cs^{134} can be removed from the initial iron-free solution. Extraction drops to 18.3% with 1 g/l of Fe^{3+} . This can be improved by adding excess $\text{K}_4\text{Fe}(\text{CN})_6$. A drawback to the method is the time required for foaming, 20 - 30 min. There are 1 figure and 1 table. The English-language reference is: R. E. Burns, M. I. Steadwell, Chem. Engng. Progr., 53, 93, 1957.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova,
Sverdlovsk (Ural Polytechnic Institute imeni S. M. Kirov,
Sverdlovsk)

SUBMITTED: October 16, 1961

Card 2/2

BAGRETISOV, V.F.; NIKOLAYEV, V.M.; KALMYKOV, Yu.A.; PUSHKAREV, V.V.

Effect of various methods of treatment on the ion-exchange properties of vermiculite. Report No.2: Reaction of vermiculite with solutions of alkalies and neutral salts. Trudy Ural.politekh.inst.no.121:35-38 '62.

(MIRA 16:5)

(Vermiculite)

(Alkalies)

(Salt)

PUSHKAREV, V.V.; TKACHENKO, Ye.V.; YEGOROV, Yu.V. ;KARLOV, V.A.

Adsorption of strontium by active manganese dioxide from water-
alcohol solutions. Trudy Ural.politekh.inst.no.121:45-48 '62.

(MIRA 16:5)

(Strontium)

(Adsorption)

(Manganese oxides)

ODINTSOV, D.G., inzh.; PUSHKAREV, V.V., kand. tekhn. nauk

Transportation of large-sized elements. Mekh. stroi. 20
no.8:11-13 Ag '63. (MIRA 16:11)

PUSHKAREV, V.V.; BUDENKOV, Ye.A.

Extraction of manganese dioxide from its hydrosol by means of
gelatine foam. Koll.zhur. 25 no.5:589-592 ~~3-0~~ '63. (MIRA 16:10)

1. Ural'skiy politekhnicheskii institut im. S.M.Kirova.

PUSHKAREV, V.V.; BAGRETISOV, V.F.; PUZAKO, V.D.; Primal uchastnye;
KAN, A.V.

Separation of strontium-90 and yttrium-90 with the aid of
gelatin foam. Radiokhimiia 6 no. 1:120-121 '64. (MIRA 17:6)

L 54470-65 EWG(j)/EWT(m)/EPF(c)/EPR(n)-2/EWG(m)/EPR/EWP(t)/EWP(b) Pr-4/Ps-4/
Pu-4 IJP(c) JD/WW/JG/GS

ACCESSION NR: AT5013647

UR/0000/65/000/000/0124/0129
542.65:539.163:546.714:66.069.8

49
46
B+1

AUTHOR: Pushkarev, V. V.

TITLE: Concentration of radioactive isotopes with colloidal ²⁷manganese ¹⁷dioxide by foaming

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Radiokhimicheskiye metody opredeleniya mikroelementov (Radiochemical methods for determining trace elements); sbornik statey. Moscow, Izd-vo Nauka, 1965, 124-129

TOPIC TAGS: radioactive isotope concentration, ¹⁹isotope separation, foaming, manganese dioxide, foam chromatography, gelatin foam

ABSTRACT: The radioactive isotopes ¹⁷Sr⁸⁹, ⁹⁰Sr, ⁹⁰Y, ⁹¹Y, ¹⁷Zr, ⁹⁵Nb, ⁹⁵Ru, ¹⁰⁶Rh, ¹³⁷Cs, ¹⁴⁴Ce, and ¹⁴⁴Pr were separated and concentrated from aqueous solutions by foam chromatography, colloidal manganese dioxide being used as the carrier and gelatin as the foaming agent. The optimum amounts of gelatin at various pH values were determined. An attempt was made to obtain a precipitate with the lowest possible moisture content (1.5-2.0% of the volume of the initial solution). It was found that this content is substantially affected by the pH of the solution, amount

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3

ACCESSION NR: AT5013647

of gelatin, rate of blowing air through the column of liquid, and difference in the levels of the liquid surface and height at which the foam fraction is poured off. It was shown that from 97.0 to 99.0% yttrium at $\text{pH} \geq 6.0$, zirconium with niobium at $\text{pH} \geq 2.0$, and cerium at $\text{pH} \geq 3.0$ are recovered from the solution with the foam product. When the foaming is repeated, these isotopes are recovered from the solution to the extent of over 99.9%. The maximum recovery of ruthenium ($\text{pH} = 4.0-5.0$) and cesium ($\text{pH} > 6.0$) is 55.0-65.0%, and that of strontium ($\text{pH} = 10.0$), 86.0%. "In conclusion, the author expresses his sincere appreciation to Ye. A. Budenkov, A. V. Kan, and G. G. Petrov, who participated in the experiments." Orig. art. has: 4 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 02Jan64

ENCL: 00

SUB CODE: IC,GC

NO REF SOV: 007

OTHER: 002

S.R.P.
Card 2/2

PUSHKAREV, N.Y.; KHRUSTALEV, B.N.; YEGOROV, Ye.V.

Possibility of estimating the size of a solvated ion radius
by measuring sorption equilibrium. Radiokhimiya 7 no.4:
400-405 1965. (MIRA 18:8)

PICHUGIN, A.A., kandidat tekhnicheskikh nauk; ~~PUSHKAREV, V.V., kandidat~~
tekhnicheskikh nauk.

Continuous flow of work is the basic method for improving the large
scale construction of residential buildings. Stroi.prom.31 no.12:15-18
D '53. (MLRA 7:1)

(Building)

PUSHKAREV, V.V., kand.khim.nauk; BAGRETISOV, V.F., kand.khim.nauk; KAZANTSEV,
Ye.I., inzh.

Protecting natural waters from contamination with radioactive
substances; some comments on the article by A.N.Maref. Gig. i
san. 22 no.11:73-74 N '57. (MIRA 11:1)

1. Iz Ural'skogo politekhnicheskogo instituta imeni S.M.Kirova.
(WATER--POLLUTION) (RADIOISOTOPES)

SHIRIN, P.K. (Moskva); POVERENNYI, L.D. (Moskva); KAMENEV, M.O. (Moskva);
BARCH, I.Z., inzh. (Khar'kov); PUSHKAREV, V.V. (Novosibirsk);
BALABAN, A.I. (Khar'kov); DZHIOTV, I.M. (Khar'kov); RUBINSHTAYN,
M.Z. (Khar'kov); RYABCHICH, V.F. (Magnitogorsk); SOLOVAREV, K.N.,
(Kazan'); KHODOROVSKAYA, O.R. (Khar'kov); NEFEDOV, Ye.M. (Leningrad).

Discussion on plans and regulations for the organization and the
technology of building. Stroi. prom. 35 no.12:5-20 D '57.

(Architecture--Designs and plans)

(MIRA 11:1)

(Construction industry)

PUSHKAREV, V. V.

78-1-43/43

AUTHORS: Voznesenskiy, S. A. , Pushkarev, V. V. , Bagretsov, V. F.

TITLE: **Sorption** of Radioactive Isotopes by Aluminum Hydroxide
(Sorbtsiya radioaktivnykh izotopov gidrookis'yu alyuminiya)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 1, pp.235-239
(USSR)

ABSTRACT: Micro concentrations of caesium-137, strontium-89-90, cerium-144 and ruthenium-106 were used as such isotopes. The object of the present investigation is the confirmation of the previous theoretical considerations (reference 1) according to the following mechanisms: 1) Ion exchange of adsorbed isotopes with potential-forming ions, or 2) Chemosorption (= chemical adsorption). In the case (1) the process can take place with charges of the same sign of the hydroxide-electrolyte and with the ions to be adsorbed, - in the case (2) with different charges. It may be assumed that the adsorption of the afore-said isotopes by aluminum oxide will be analogous to that by iron oxide with respect to its character. The

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Sorption of Radioactive Isotopes by Aluminum Hydroxide

isotopes were used as chlorides and without carrier. The deposit of hydroxide from aluminum chloride was obtained by 3 methods in view of investigating the influence of the ageing of the adsorbent on the value of adsorption of the radioactive micro-component. A) Aluminum-brine was produced by means of acetic acid in the radioactive solution, according to Gofman, and was (reference 3), subsequently coagulated, dried and centrifuged. The activity was determined in the stale solution. B) Isotopes were introduced into a ready hydroxide-sol; further see (A). C) The radioactive micro-components were introduced into the solution 1 hour after the coagulation; for the rest, see (A). Sodium sulphate was used for coagulation. The pH-value was adjusted by means of caustic alkali (0,05 n). The concentration of the radioactive micro-components exceeded in no case 5μ Curie/l. The adsorption is expressed in % of the initial activity in the tables and figures. The values of adsorption in pulses/minute/0,1 mg of the aluminum hydroxide are given in figure 6-6. The results in table 1 show that the addition of $\text{Na}_2\text{SO}_4 \cdot 10 \text{H}_2\text{O}$ up to 24,0 mg/100 ml exercises no influence on the value of adsorption under the given conditions. Only the complete-

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Sorption of Radioactive Isotopes by Aluminum Hydroxide

ness of the aluminum-precipitation is influenced by the change of concentration of the precipitating agent (in accordance with reference 4, 5). The dependences of the values of adsorption of the radioactive micro-components on the pH of the milieu are given in figures 1 to 5. With pH 5,5 to 6,0 the adsorption of ruthenium and cerium increases suddenly, in order to attain its culminating point with pH 6,5 to 7,0. The same holds for strontium, however, with a culminating point at approximately 9,0 between pH 6,5 to 7,0. The maximum adsorption for ruthenium and strontium amounts to 99,0 to 99,8 % of the initial activity, the same with strontium of 70,0 % (test C) up to 100 % (test A). Caesium is not adsorbed under all test conditions. pH 6,9 corresponds to the isoelectric point of the aluminum-hydroxide-brine (reference 6). Consequently, ruthenium and cerium are adsorbed with a positive charge of the hydroxide, strontium, however, with a negative one. Taking account of the previous theoretical considerations (reference 1), it may be concluded that the ruthenium- and cerium ions are adsorbed simultaneous-

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Sorption of Radioactive Isotopes by Aluminum Hydroxide

ly with the aluminum ions, in their property as potential-forming elements. The adsorption of the positively charged strontium on a negatively charged deposit takes place due to the formation of aluminate. It may be concluded from figure 6 to 8 that the adsorption takes place here within the range of the rectilinear part of the isothermal line. It is shown in table 2 that the adsorption of cerium and ruthenium increases with the temperature, whereas that of strontium-89 remains practically constant. Figures 1 to 3 prove that the adsorption of strontium decreases in the series of test conditions A - B - C. This is of importance for the purification of the radioactive waste waters from the laboratory by means of metallic hydroxides. There are 8 figures, 2 tables, and 6 references, all of which are Slavic.

ASSOCIATION: Ural Polytechnical Institute imeni S. M. Kirov, Sverdlovsk
(Ural'skiy politekhnicheskiy institut im. S. M. Kirova, Sverdlovsk)

Card 4/5

Sorption of Radioactive Isotopes by Aluminum Hydroxide

78-1-43/43

SUBMITTED: July 8, 1957

AVAILABLE: Library of Congress

Card 5/5

PUSHKAREV, V.V., kand.tekhn.nauk, dotsent; MAKEYEV, V.N., inzh.-ekon.

Economic efficiency of measures on increasing productivity of
cranes in mounting large-panel buildings. Trudy MIEI no.9:311-327
'58. (MIRA 11:6)

(Cranes, derricks, etc.)

PUSHKAREV V.V.

25(5)120(5)
 Moscow. Kambarnovo-ekonomicheskii institut Leningradskogo Otdelenskogo
 Poryadok perebivaniya ekonomicheskoy effektivnosti kapitalnykh vkladov na
 etape stroitel'stva ekonomiki i organizatsii stroitel'stva v proizvodstve, a
 imenno stroitel'stva promyshlennosti (Problems of Investment Management in the
 Field of Capital Investments by Improving the Economy and Organization of Con-
 struction Work and Planning) Moscow, Gosstroyizdat, 1979. 873 p. (Series:
 Nauka. Seriya, 779. 14) Errata slip inserted. 2,000 copies printed.

Additional Supporting Agencies: USSR. Gosstatizvestiya komitet po delam
 statistiki. Otdel ekonomicheskikh stroitel'stva, Akademiya stroitel'stva i
 Kambarnovo-ekonomicheskii institut stroitel'stva i ekonomiki stroitel'stva
 i ekonomiki stroitel'stva i ekonomiki stroitel'stva.

Eds.: B. I. Babitskiy, G. A. Dorozhnik, A. G. Gerasimov, S. A. Yefremov, I. A. Ka-
 novich, A. G. Kotelnikov, V. V. Uspenskiy, E. A. Mironov, I. P. Shchegolev,
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 G. A. Dorozhnik, Professor, S. I. Kuznetsov, Professor, S. I. Kuznetsov, Professor,
 S. A. Mironov, Professor, G. V. Tselov, Professor, S. A. Tselov, Professor,
 I. V. Vasyuk, Professor, and of this volume: V. P. Gerasimov (Chairman), Zvezda, V. V.
 Candidate of Technical Sciences.

PREFACE: This collection of articles is intended for staff members of construc-
 tion organizations, design bureaus, and scientific research establishments as
 well as for faculty members and students of institutions of higher education.

CONTENTS: This collection of reports on construction problems was originally
 presented and discussed at a scientific-technical conference held in Moscow
 in February 1978 under the auspices of the Moscow Engineering and Techni-
 cal Institute and other government and scientific organizations. Results of
 increasing economic benefits from capital investments. Possibilities
 of organizing and planning construction projects are reviewed. Results of
 efforts by construction and design organizations to reduce the costs of con-
 struction and building are examined. Methods to increase the productivity of
 labor, and to boost work and planning efficiency are analyzed. Problems in
 preparing estimates, making financial forecasts, and financing construction
 projects are discussed. No references are given.

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Card 6/11

SCV/78-3-12-32/36

AUTHORS: Voznesenskiy, S. A. (Deceased), Bagretsov, V. F.,
Pushkarev, V. V.

TITLE: The Interaction Between ~~Semi-baked~~ Dolomite and Strontium Ions
in Aqueous Solution (Vzaimodeystviye polubozhzhennogo dolomita
s ionami strontsiya v vodnykh rastvorakh)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 12,
pp 2801-2804 (USSR)

ABSTRACT: The adsorption of strontium on half-baked dolomite was investi-
gated using the dynamic method, i.e., by filtering a strontium
solution in micro concentrates through a column packed with
dolomite. The dolomite used for filtering had been baked at
720-750°. The micro amounts of strontium adsorbed were de-
termined using the radiometric method. The solution of radio-
active Sr⁸⁹ was filtered through the filter of magnesium mass.
The relationship between the adsorption and the size of the
filter layer and time of contact was investigated. The results
showed that with a constant filtration velocity an increase
in the filter layer can increase the adsorption of strontium

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SOV/78-3-12-32/36

The Interaction Between ~~Semi-Valved~~ Dolomite and Strontium Ions in Aqueous Solution

up to 56%. The adsorption of the strontium depends upon the grain size of the dolomite mass, so that with coarse dolomite crystals the adsorption is 22%, whereas it is 44% with fine crystals. In filtering strongly alkaline strontium solutions (in NH_4OH and in NaOH) it was found that the in NH_4OH solution required a relatively longer time for constant adsorption, whereas the adsorption from the NaOH strontium solution was zero. The adsorption of strontium on the dolomite mass is chemisorptive in nature. The adsorption is greater in the presence of anions which form salts of low solubility with strontium. There are 6 tables and 3 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskii institut im. S. M. Kirova (Ural Polytechnical Institute imeni S. M. Kirov)

SUBMITTED: November 3, 1957

Card 2/2

DRAKHON, D.A. [Draihon, D.A.]; PUSHKAROV, V.V. [Pushkar'ov, V.V.]

Effect of strain hardening conditions on the physical state of the surface layers of hardened low-tempered steel. Dop. AN URSR no.3: 369-371 '63. (MIRA 17:10)

1. Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR. Predstavleno akademikom AN UkrSSR P.P. Belyankinym [Beliantin, P.P.].

(N)

L 12166-66

EWp(e)/ENT(m)/EWA(d)/T/ENP(t)/ENP(z)/ENP(b) MJW/JD/WH/

ACC NR: AP5028373

JG/DJ/WH

SOURCE CODE: UR/0369/65/001/005/0567/0570

AUTHOR: ^{44,55} Fedorchenko, I. M.; ^{44,55} Filatova, N. A.; ^{44,55} Pushkarev, V. V. ⁷³

ORG: ^{44,55} Institute of Problems in Metal Studies, AN UkrSSR, Kiev (Institut problem ^B materialovedeniya AN UkrSSR)

TITLE: ^{11,44} Antifriction properties ¹⁵ of iron-base cermets

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 5, 1965, 567-570

TOPIC TAGS: antifriction material, cermet, iron alloy, metal ceramic material, sulfide, metal physical property

ABSTRACT: The authors studied the properties of several new ¹¹cermets based on iron and compared the properties with those of BK babbitt. The test compositions of the materials were prepared from a reduced ²⁷iron powder (PZh1M1 GOST 9849-61) with various additives by sintering in a hydrogen atmosphere at temperatures from 1050 to 1200C. The main conclusion is that the introduction of sulfides into iron-base metal-ceramic materials is an effective means of improving their antifriction properties. The introduction of zinc sulfides makes it possible to reduce the friction coefficient of iron-base cermet antifriction materials to ^{125,44} 0.006 and to increase the setting pressure limit to 100 dan/cm². Orig. art. has:

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ACC NR: AP5028373

1 figure and 1 table.

SUB CODE: 11 / SUBM DATE: 15Oct65 / ORIG REF: 004

HW
Card 2/2

PUSHKAREV, Yakov Nikolayevich; MOROZOV, N.D.; VYDRIN, P.G., redaktor;
ZUDAKIN, I.M., tekhnicheskiiy redaktor

[High-speed cutting of trapezoidal threads in high-strength alloy
steels] Skorostnoe narezanie trapetsoidal'nykh rez'b na legirovan-
nykh vysokoprochnykh staliakh. Moskva, Gos.izd-vo oboronnoi promysh.
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Behavior of some minerals during heating under the conditions of the increased argon pressure. Izv. AN SSSR. Ser.geol. 30 no.11:3-13 N '65. (MIRA 18:12)

1. Laboratoriya geologii dokembriya AN SSSR i Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova. Submitted July 7, 1965.

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Structure and petrology of the Akba-i-Dzhumon intrusion. Izv.
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1. Iz laboratorii fiziologii zhelez vnutrenney sekretsii (zav. chlen -korrespondent AMN SSSR prof. Ye.N. Speranskaya) Instituta fiziologii imeni Pavlova (dir. - akademik V.N. Chernigovskiy) AN SSSR, Leningrad. Predstavlena akademikom V.N. Chernigovskim.

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Transmission of impulses through the cat's inferior mesenteric plexus under conditions of changes in the blood sugar level.
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(MIRA 18:3)

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in pulsating mode. Vop. kur., fizioter. i lech. fiz. kul't. 29 no.4:
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G.V.; TOF'UL', A.I.; KHAKHAM, Ya.M., tekhn. red.

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Concentration changes in the near electrode layer of an iron
bath and peculiarities of cathodic deposition of iron. Zhur.
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So.: Knizhnaya Litopis', No. 7, 1956.

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7 27
 1-4E2C
 Influence of anions on the pH of (ferrous) hydroxide formation and the electrodeposition of metal powder from solutions of iron sulfate. A. I. Levko and S. A. Pushkareva, Zhur. Priklad. Khim. 29, 1223-9 (1986). The pptn. of $\text{Fe}(\text{OH})_2$ was followed by measuring the pH as FeSO_4 soln. was titrated with NaOH . The purpose was to evaluate additives which could retard the pptn. and thus offset pH changes in the cathodic deposition of powd. Fe. Three factors had an important effect on the pH at which pptn. occurred: (1) the concn. of FeSO_4 , (2) the nature of the anion, (3) the charge on the anion. Changes in the cation had no effect as shown by adding NaCl , KCl , Na_2SO_4 , or K_2SO_4 to the FeSO_4 soln. before titration. More-concd. FeSO_4 solns. required a higher pH to cause pptn. Increasing charge on the anion hindered the pptn. as shown by addns. of KNO_3 , K_2SO_4 , and K_3PO_4 . Addns. of an extract of poly(vinyl chloride) or of gelatin had no effect, but Trilon B hindered the pptn. The latter compd. formed an anion while the other compds. did not. A soln. of 1.5N $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ contg. 40 g./l. of NaCl had sufficient stability to form a highly dispersed powd. Fe at 30 mmp./sq. dm. (18-20°).
 R. D. Misch.

PM PB fra
 MTH